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Monthly Statistical Report

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JULY 1991

SUMMARY

The rate of decline in total deliveries, which had been running at around 4 percent for much of the first half, continued to moderate in July. For the month, deliveries slipped 2.1 percent versus one year earlier, following a 2.6 percent decline in June.

The direction of these developments in petroleum deliveries is not inconsistent with the apparent bottoming out of the economic recession. However, even with the slight upturn in GNP estimated for the second quarter, the economy may have only begun to regain the ground lost during the previous two quarters. On a year-to-year basis, the second quarter's slight gain over the first translates into a decline in GNP of roughly half a percent versus a year ago, and in the most recent month or two the economy could have at best barely matched its year-ago level. Thus, it is not surprising that deliveries, which had been slipping even before the recession began, have still been declining year to year, though at a lesser rate than before.

Most major products shared in the moderating of the decline rate. Gasoline deliveries, already apparently stronger in the second quarter than our initial estimates, rose 1.3 percent in July. Kerosine jet fuel deliveries met with their first year-to-year increase since February, while distillate deliveries, which had experienced declines of 4 to 5 percent during the first and second quarters, also rose slightly. Residual fuel oil deliveries, however, still fell 18 percent from a year ago. It remains unclear what portion of July's lessening in the decline in deliveries represents underlying consumption trends, however. For example, despite the month's increase in gasoline deliveries, recent flatness in travel trends and continued improvement in average fleet efficiency suggest that underlying consumption was still down, year to year, in July.

Domestic crude oil production, continuing to depart from the decline trend of the prior five years, was up 3.7 percent for July. More than half the apparent increase, however, was in Alaska, where year-ago levels had been temporarily reduced by facilities enhancement projects. Even so, Alaskan production so far this year has averaged 150 thousand B/D higher than what would have occurred had the decline trend prior to last summer's North Slope projects continued uninterrupted.

Total imports continued their year-to-year decline in July, falling 13 percent. Even with the moderation in the weakness in domestic deliveries of the past two months, the underlying trend in imports has continued to be one of decline. July's product imports were higher than for June, but, at 1.9 million B/D, were still down 13 percent from a year ago.

Refinery activity, which during the second quarter had been running ahead of year ago levels despite the weakness in deliveries, slipped in July. Input to distillation units declined about 4 percent, with output of most products declining as well versus last July. Gasoline production, however, held roughly steady.

Total inventories rose 10 million barrels for the month, about half the July average. But because of substantial rebuilding during the second quarter, the month-end level of 1,085 million barrels slightly exceeded the average for July in recent years.

PRODUCT SUPPLIED [1/]

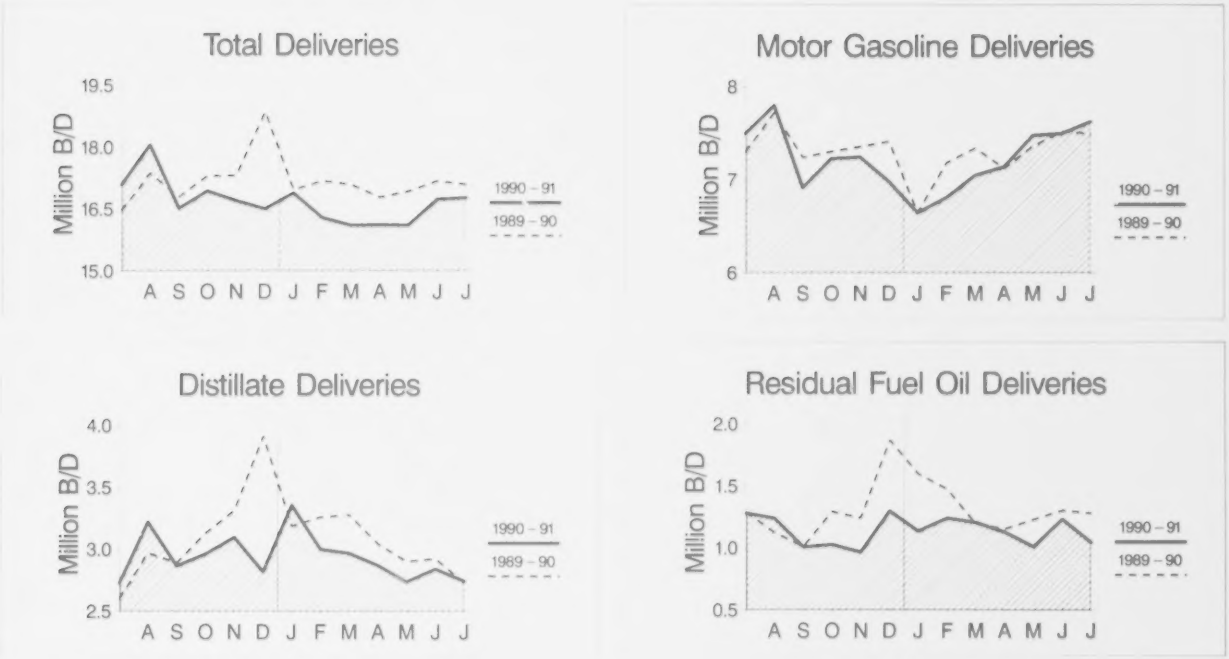
Gasoline

INCREASE CONTRASTS WITH EARLIER DROP. Gasoline deliveries rose 1.3 percent in July—and with the surprising strength of May's recently-released deliveries data from the Department of Energy, second quarter deliveries are now calculated to have been up slightly as well. These data are somewhat puzzling, however, since although hints of an economic turnaround and declines in gasoline prices would be expected to have moderated gasoline's rate of decrease, it seems doubtful that underlying consumption in July actually matched or exceeded that of a year ago.

With July's retail prices slipping another 2.5 cents from June, gasoline prices, on an inflation-adjusted basis, have by now been within a few percent of year-ago levels for nearly six months, despite higher federal and state taxes. Thus, the demand-dampening effects of higher prices in the latter part of last year, when prices briefly reached levels about 25 percent higher than immediately prior to Iraq's invasion of Kuwait in early August, have likely long since dissipated. Signs that the recession has bottomed out also suggest some strengthening, though perhaps only moderate, in gasoline demand.

Nevertheless, even before the most recent recession, gasoline deliveries were declining because of the continued improvement in the average fuel efficiency of vehicles on the road. In fact,

	API ESTIMATES JULY		YEAR-TO-DATE	
	Million B/D	Percent Change	Million B/D	Percent Change
Total domestic deliveries	16.7	(2.1)	16.4	(3.6)
Crude production[2/]	7.4	3.7	7.4	1.0
Total imports[3/]	7.9	(13.0)	7.5	(12.5)
Stocks (million bbl)[4/]	1,085	(3.3)	na	na



since 1985, though overall miles traveled have increased more than 20 percent, highway fuel consumption (including diesel) has risen only about 8 percent. Thus, with the most recent data on miles traveled roughly flat versus a year ago, underlying consumption would still be expected to have declined slightly in July.

Distillates

FLAT HIGHWAY USE, BUT STRONGER UTILITY DEMAND. Distillate deliveries increased, year to year, in July for only the second time since last August. However, while the modest 0.5 percent increase is an extension on the pattern of moderating losses evident since the end of the war, (and is not inconsistent with the premise of improving economic conditions), indicators of underlying consumption in July showed almost no change in the year-to-year trend from June.

Rail ton-miles remained down, year to year, in the 3-4 percent range, while highway truck tonnage is believed to have been about the same as last July. If there was a sector in which distillate demand perhaps grew, it was the small, but weather-sensitive, utility sector, where higher temperatures likely increased demand by peak distillate-fired generating units. However, it is unlikely that the effects of weather had an impact greater than 1 percent, or 25-30 thousand B/D, on distillate deliveries.

Residual Fuel Oil

SHARP DECLINE OVERSTATES TREND. Contrasting with the moderating declines of recent months, resid deliveries were off 18.4 percent, or 236 thousand B/D, in July—a drop somewhat surprising in magnitude given warmer weather, an increase in power generation, and increasingly competitive resid prices vis-a-vis gas. However, given the variability inherent in the monthly delivery data, it is too early to ascribe July's sharper decline to any dramatic shift in the underlying consumption trend, which we have estimated at about a 6 percent decline in recent months.

Early in 1991, the decline in resid deliveries had resulted, to a considerable degree, from utility fuel substitution with natural gas. From January to April, the drop in net petroleum electricity generation was offset almost one-for-one by an increase in net generation from gas. Relative prices were an influencing factor, as were the additional supplies of gas freed up by the relatively mild winter. But, relative prices have moved closer together in recent months, and by the end of July, spot resid prices were actually slightly more competitive with gas than they had been a year ago. Furthermore, cooling degree days in the resid-intense East were up more than 10 percent from already warm weather a year ago. The result was an increase of about 3-4 percent in power generation in the East.

These two factors (price and weather) make fuel switching with gas an unlikely explanation for July's sharper decline in deliveries. Natural gas is often the fuel of choice for dual-fueled generating units during the summer. However, as temperatures go up, the potential falls for switching more resid consumption to gas, since most utilities with the capacity (and for whom it is economic) to burn gas, already are burning gas. As a result, summer surges in electricity demand are often accompanied by disproportionate increases in resid consumption by utilities. This occurred in May of this year, when particularly warm weather contributed to a 12 percent, year-to-year increase in resid-fired generation (reversing an 18 percent, year to year, decline during the more temperate first third of the year). Based on weather this July versus last, increased resid-fired generation could be expected to have added perhaps 25-30 thousand B/D to utility consumption.

In bunker markets, resid deliveries are thought to have been affected by the July 15 extension of California's state/local sales

tax to bunker fuels, which had previously been exempt from the 8.25 percent levy. With California accounting for roughly 40 percent of U.S. resid bunkers, the impact could be significant if the tax (which equates presently to about a dollar a barrel), encourages more overseas bunkering.

Kerosine Jet Fuel

DECLINE REVERSED FOR JULY. After declining in five of the year's first six months, jet fuel deliveries grew in July by 2.1 percent. The growth was not unexpected, given moderating declines in passenger travel and a return of growth in air cargo shipments over the past few months.

Despite July's growth, the divergence between declines in deliveries and apparent declines in underlying consumption over the past four months has not been eliminated. It is not unusual, in the short run, for growth in jet fuel deliveries to be at a variance with growth in miles flown; however, since April, deliveries have been off by roughly 4 percent more than estimated underlying consumption, indicating either a relatively large draw on non-primary inventories over this period, or a drop off in jet fuel consumption outside the commercial aviation sector.

While air traffic has, without question, picked up from wartime lows, there have been mixed signals during the past few months over the extent of the recovery. Growth has apparently been stronger for majors than for nationals or large regionals. Even accounting for the effects of route transfers and for the demise of Eastern Airlines, miles flown by major U.S. airlines have been up in the 1-2 percent range over the past three months, according to company traffic reports. However, estimates provided by the Air Transport Association (which includes non-majors), indicate a decline in miles flown of roughly the same order of magnitude. Transportation Department data on fuel consumption tends to back this up, with consumption down in recent months, year to year, both on domestic and on international routes.

Other Oils

DELIVERIES DROP 5.4 PERCENT. Deliveries of "other oils" dropped 5.4 percent in July, through much of the decline reflected unusually strong deliveries last July. Had the year-ago figure been closer to last year's trend, deliveries would have been down only slightly. Even so, for the year to date, deliveries of "other oils" have averaged a little less than 4 million B/D, the lowest level for a similar period in five years.

SUPPLY [1]

Production

ALASKAN OUTPUT 150 THOUSAND B/D ABOVE PRIOR TREND. Domestic crude oil production rose 3.7 percent, or about 260 thousand B/D, over the year-ago level in July. Lower 48 production increased close to 120 thousand B/D for the month, keeping its year-to-date average even with the year-ago level—in contrast with the drop of more than 20 percent over the previous five years. But more than half of July's increase in the U.S. total was in Alaska, the result of comparison against last summer's levels which had been temporarily reduced by water and gas handling projects on the North Slope.

Nevertheless, so far this year, Alaskan production has been substantially above what it would have been without last year's projects. Between 1988 and early 1990, Alaska's production decline averaged more than 100 thousand B/D per year. Production there so far this year has averaged about 150 thousand B/D above the levels implied had that decline trend continued without interruption. Even so, Alaskan production for the first seven months was still down nearly 10 percent from its peak in 1988 of just over 2 million B/D.

Well completions rose 9 percent in the second quarter, with a 28 percent increase in oil well completions partially offset by an 8 percent drop for natural gas, according to the most recent API estimates. Dry holes rose about 2 percent versus the same quarter one year earlier. The increase in oil well completions, however, was measured against year-ago completions which had been at the lowest second-quarter level since the early 1970s. Even with this year's second-quarter increase, oil well completions were still only about one third their level of 1985.

In addition, because data on well completions measure activities that differ from those measured by figures such as those on rotary rig activity, trends in completions can lag behind other indicators. Thus, although estimated total well completions rose in the second quarter, the number of active rigs fell 12 percent year to year.

Imports

YEAR-TO-YEAR DECLINE CONTINUES. At about 7.9 million B/D, total imports were down more than 1.15 million B/D, year to year, in July. While this 13 percent drop more than doubles the rate of decline in recent months, it reflects smaller stock builds this July than last. Had inventory builds been more typical for the time of year, then imports of about 8.3 million B/D would have been needed for the month. This represents roughly a 700 thousand B/D drop from the stock-adjusted figure for last July—about the same as in this year's first half—as the effects of moderating declines in product deliveries during July were balanced by higher crude and NGL production.

Declining crude imports accounted for roughly three-quarters of the year-to-year drop. Down roughly 80 thousand B/D during the second quarter, crude imports were off over 890 thousand B/D in July. However, the comparison is made against exceptionally high levels during July a year ago, when crude imports reached their highest monthly mark since the late seventies.

Though higher than in June, imports of refined products continued to be off sharply, year to year. Transatlantic price premiums early in the month contributed to the 189 thousand B/D fall in finished gasoline imports to 243 thousand B/D. Imports of other major products were down in excess of 20 percent, as well. Jet kerosine imports fell 32 thousand B/D to 66 thousand B/D; distillate imports declined 56 thousand B/D to 180 thousand B/D; and resid imports were off 149 thousand B/D to 387 thousand B/D.

U.S. product exports have been an area of keener interest since the Gulf crisis began a year ago. While much of the surge in U.S. exports, (particularly jet and distillate fuel) resulted from temporary factors related to war and weather, exports in more recent months have remained slightly above their pre-invasion trend. For July, total exports are estimated to have been up, year to year, by about 250 thousand B/D, roughly two-thirds of which were refined products. For a more in-depth look at longer-term trends

Trends in U.S. Exports of Refined Products

Summary. U.S. refined product exports were trending up even before last August's Iraqi invasion. On average, from 1985 to 1989, these exports increased by about 35 thousand B/D per year from 577 thousand B/D to 717 thousand B/D. Though growth rates were greatest for light products, heavy products (with limited U.S. markets) grew as well, and still accounted for more than half of all product exports. After crisis-related surges between September and March, product exports appear to be returning to levels more consistent with the 1985-89 trend. Amid the export increase, product imports were trending up as well. . . by roughly 50 thousand B/D per year more than the increase in exports. While on the surface, it may seem illogical for imports and exports to be increasing simultaneously, such an occurrence is not unusual. Regional demand differences and transportation logistics, at times, make it economical for the U.S. to both import and export refined products. For exports, the increase has resulted in part from the fact that demand growth has outpaced growth in refinery production abroad, particularly in Japan, Canada and Latin America. A continuation of this, along with refinery capacity constraints in Mexico, could help fuel continued growth in U.S. refined product exports. However, unused refining capacity in the U.S. has been declining over the past decade, and could be further impacted by environmental constraints. One outcome of this might be a reduced potential for further export growth and a tightening up of domestic supplies.

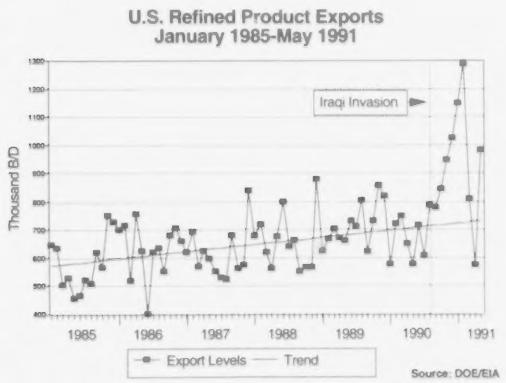


Figure 1

Post-invasion Exports Contrast with Pre-Invasion Trends. but the Surge has Moderated. Between 1985 and 1989, U.S. refined product exports increased, on average, by about 35 thousand B/D (or 5.6 percent) per year. With the exception of gasoline, major product imports increased as well, as transportation logistics and regional demand differences made it economical to both import and export more. Export growth came across the board, but was particularly strong among light products. Exports of gasoline, jet fuel and distillate fuel were up at average annual rates of 42 percent, 18 percent, and 9.4 percent, respectively, compared to average annual growth rates of 5.7 percent for petroleum coke and 2.2 percent for residual fuel. Still, the product export picture is dominated by heavy products, with resid and petroleum coke accounting for roughly 60 percent of the total. And despite the growth, gross exports remain a small share of refined product demand—about 4 percent overall, but only about 3 percent of distillate, 2 percent of jet, and less than 1 percent for gasoline. In the seven months following the Iraqi invasion last August, U.S. refined product exports surged by about 250 thousand B/D, year to year, predominantly in middle distillates. However, the surge resulted primarily from temporary factors (military and weather-related), which ended by March. While Kuwaiti refined product continues to be off world markets, it is not believed that this absence significantly affects the underlying trend growth in demand for U.S. product exports. As evidenced by Figure 1, refined product exports have begun to approach levels consistent with the pre-invasion trend, perhaps slightly higher with surging gasoline exports to Mexico in recent months facilitated by the March shutdown of the 105 thousand B/D Azcapotzalco refinery.

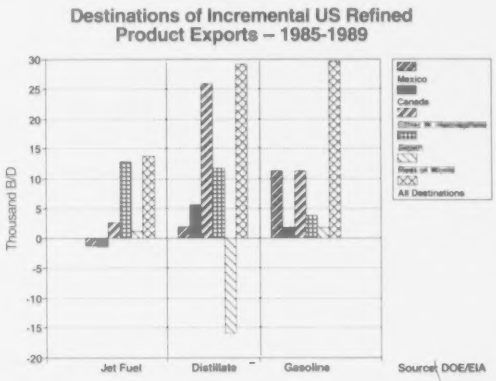


Figure 2

Destinations for Additional U.S. Product Exports. Most of the growth in refined product exports between 1985 and 1989 was destined for Canada, Japan and Latin America. Petroleum product demand has grown more quickly than refinery production in these areas. Between 1985 and 1989, production of refined products in the U.S. grew at roughly the same rate as demand, while demand grew 11 percent more quickly than refinery runs in Japan, 9 percent more quickly in Latin America, and 3 percent more quickly in Canada. Figure 2 highlights how destinations for incremental exports between 1985 and 1989 differed on a product-by-product basis. For gasoline, increased exports to Mexico and other Latin American countries accounted for about three quarters of the total increase. For distillate fuel oil, increased Western Hemisphere exports more than accounted for all of the increase. In the case of jet fuel, increased exports to Japan accounted for over 90 percent of the total growth.

Assessment. Trends in exports are dependent on differential demand and supply conditions at home versus abroad. Petroleum product demand in Japan, Canada and Latin America grew more quickly than refinery production in these areas between 1985 and 1989. With output of refined products increasing in the U.S. over the past several years, American exports have been able to satisfy a portion of the growing import needs of these nations. However, even amid the increase in exports, U.S. imports of refined products trended up as well. While demand growth and capacity constraints abroad could increase the call on U.S. exports, those same forces at home may reduce their availability. Depressed domestic demand could turn around with the resumption of economic growth. And U.S. refinery capacity may become a limiting factor as well, with utilization rates of operating capacity relatively high (having increased from 68.5 percent to 87.1 percent between 1981 and 1990). The imposition of further constraints on available capacity could impact refined product exports, and could tighten domestic product markets as well.

in product exports, see the accompanying article on page 6 of this report.

Refinery Operations

MOST PRODUCTS DROP, BUT GASOLINE OUTPUT STEADY.

Though the declines in deliveries have moderated in the past two months, deliveries have still been down—and refinery activity, after running ahead of a year ago for three months in a row, slipped in July. Input to distillation units dropped 4.1 percent versus one year earlier, following year-to-year increases for the second quarter which had helped to raise product stock levels from lower levels earlier in the year. Production of distillate fuel oil dropped 1 percent, kerosine jet fuel 4.7 percent, and residual fuel oil 6.6 percent from a year earlier. Gasoline output, however, held roughly steady.

Utilization of capacity in operation amounted to about 91 percent, versus about 93 percent in June and 95 percent a year ago. As a percent of reported capacity, the rate is calculated at 88.0 percent, down from 92.4 percent last July.

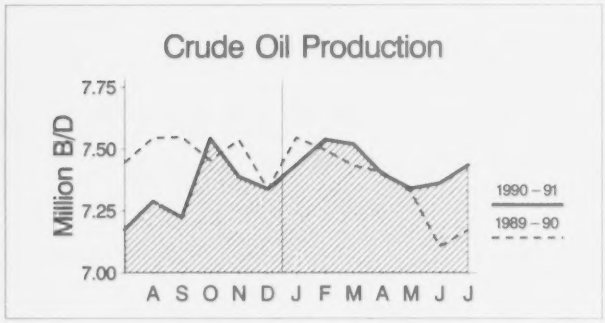
Inventories

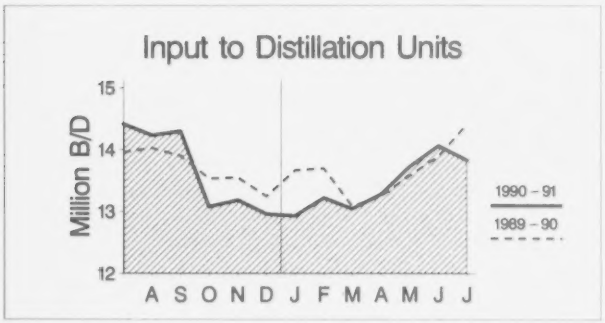
STOCKS CONTINUE TO RISE BUT AT A LESSER RATE.

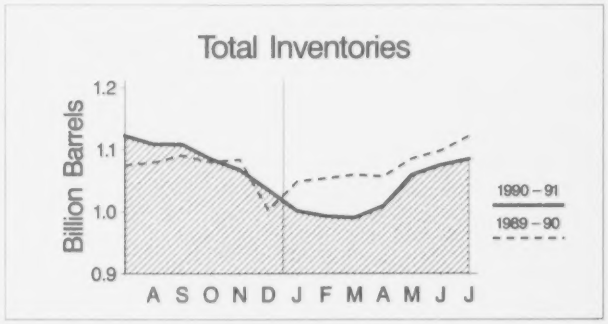
Following the substantial, 85 million barrel build in total inventories during the second quarter, July's inventories rose at a less rapid rate. Though the 10 million barrel increase was less than half the 23 million barrel average for the month, the overall level of inventories at month-end remained slightly above the average level for July of recent years.

With the bulk of the peak summer demand period gone, gasoline inventories, after rising during May and June, slipped 7 million barrels in July. July's ending level of 211 million barrels, though below recent years' inventories for the same month, were slightly above recently-observed lows. Distillate stocks rose 8 million barrels to 122 million barrels, a level slightly above the recent-year average for the month.

Crude oil stocks slipped 4 million barrels to 346 million barrels. Though 34 million barrels or 9 percent lower than last July's higher-than-typical level, they were close to the upper end of the typical historical range of about 330 to 350 million barrels.







1/ Total supply, i.e., production plus imports adjusted for net stock change is equal to total products supplied from primary storage. Total products supplied from primary storage less exports is equal to total domestic products supplied. Information contained in this report is derived from information published in the API Weekly Bulletin and is based on historical analysis of the industry. All data reflect the most current information available to the API and include all previously published revisions.

2/ Includes lease condensate.

3/ API data do not include crude oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR (according to the U.S. Department of Energy, the SPR held approximately 569 million barrels as of July 31, 1991).

ESTIMATED UNITED STATES PETROLEUM BALANCE
(Daily Average in Thousands of 42 Gallon barrels)

Products Supplied/Supply From Primary Storage	JULY			YEAR-TO-DATE		
	1991/1	1990/2	% Change	1991/3R	1990/2	% Change
Products Supplied:						
Total motor gasoline	7,596	7,496	1.3	7,175	7,236	(0.8)
Finished leaded motor gasoline/*	271	406	(33.3)	273	425	(35.8)
Finished unleaded motor gasoline/*	7,325	7,090	3.3	6,902	6,811	1.3
Naphtha-jet	182	147	23.8	176	177	(0.6)
Kerosine-jet	1,286	1,259	2.1	1,260	1,319	(4.5)
Distillate fuel oil	2,739	2,726	0.5	2,929	3,042	(3.7)
Residual fuel oil	1,044	1,280	(18.4)	1,139	1,316	(13.4)
All other oils/4	4,084	4,318	(5.4)	3,970	4,018	(1.2)
Reclassified/5	-210	-142	47.9	-232	-86	169.8
Total domestic products supplied	16,721	17,084	(2.1)	16,417	17,022	(3.6)
Exports	947	696	36.1	1,034	765	35.2
Total products supplied	17,668	17,780	(0.6)	17,451	17,787	(1.9)
Supply:						
Domestic production:						
Crude oil/6	7,435	7,173	3.7	7,432	7,355	1.0
Natural gas liquids	1,637	1,484	10.3	1,651	1,510	9.3
Other supply/7	1,061	849	25.0	1,119	941	18.9
Total domestic supply	10,133	9,506	6.6	10,202	9,806	4.0
Imports:						
Crude oil, total/8	5,969	6,855	(12.9)	5,745	6,227	(7.7)
Canadian	667	659	1.2	752	629	19.6
Other	5,302	6,196	(14.4)	4,993	5,598	(10.8)
Products, total	1,899	2,193	(13.4)	1,741	2,324	(25.1)
Residual fuel oil	387	536	(27.8)	397	557	(28.7)
Other	1,512	1,657	(8.8)	1,344	1,767	(23.9)
Total imports	7,868	9,048	(13.0)	7,486	8,551	(12.5)
Total supply	18,001	18,554	(3.0)	17,688	18,357	(3.6)
Stock change, all oils	333	774	******	237	570	******
Refinery Operations						
Input to crude oil distillation units	13,822	14,414	(4.1)	13,441	13,653	(1.6)
Operable capacity	15,708	15,598	0.7	15,683	15,584	0.6
Refinery utilization (%)/9	88.0	92.4	(4.8)	85.7	87.6	(2.2)
Crude oil runs	13,664	14,212	(3.9)	13,249	13,456	(1.5)

Stocks (millions bbls.)	1991		1990/2	% Change From	
	Jul. 31/10	Jun. 30/10	Jul. 31	Previous month	Year Ago
Crude oil/8	345.9	349.6	379.5	(1.1)	(8.9)
Unfinished oils	110.5	109.2	112.1	1.2	(1.4)
Total motor gasoline/**	210.6	217.9	218.2	(3.4)	(3.5)
Finished leaded motor gasoline/*	7.5	7.4	10.5	1.4	(28.6)
Finished unleaded motor gasoline/*	164.7	170.7	169.2	(3.5)	(2.7)
Naphtha-jet	5.7	5.8	6.3	(1.7)	(9.5)
Kerosine-jet	42.7	42.8	44.6	(0.2)	(4.3)
Distillate fuel oil	121.6	113.3	125.0	7.3	(2.7)
Residual fuel oil	45.4	44.1	49.0	2.9	(7.3)
All other oils	202.8	192.2R	187.7	5.5	8.0
Total all oils	1,085.2	1,074.9R	1,122.4	1.0	(3.3)

/1 Based on API estimated data converted to a monthly basis.
/2 Source: U.S. Department of Energy.
/3 January-May, DOE, June-July, API.
/4 Includes crude losses.
/5 Beginning with January 1981, U.S. Department of Energy began using a new data collection system which encompasses a method to ascertain the amount of product reclassified during the production phase. So that there will be nodouble counting of these volumes, they are subtracted from the total domestic products supplied.
/6 API estimate; includes lease condensate.
/7 Includes Unaccounted-for crude oil, which will reflect withdrawls from the SPR when they occur, processing gain, field production of other hydrocarbons and alcohol.
/8 Data do not include oil imported for the Strategic Petroleum Reserve (SPR) nor crude oil stocks held in the SPR.
/9 Represents "Input to crude oil distillation units" as a percent of "Operable capacity".
/10 Derived by interpolating API weekly stocks data.
/R Revised.
/* Included in motor gasoline.
/** Includes finished leaded, finished unleaded, and motor gasoline blending components stocks.